CLAIMS

Cancel claims 1-6.

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7. (Twice Amended) The method of claim 16 wherein the etching chemistry comprises a volumetric ratio of all fluorocarbon to the ammonia of at least 20:1.

8. (Amended) The method of claim 16 wherein the etching comprises ~~plasma~~ etching.

9. (Amended) The method of claim 16 wherein the etching comprises magnetically enhanced plasma etching.

10. (Amended) The method of claim 16 wherein the etching comprises substantially anisotropic etching of the silicon nitride comprising layer.

Cancel claims 11 and 12.

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14. (Amended) The method of claim 16 wherein the etching chemistry comprises at least two fluorocarbons.

15. (Amended) The method of claim 16 wherein the etching chemistry comprises at least three fluorocarbons.

16. (Twice Amended) A method of forming integrated circuitry comprising:

forming a layer comprising silicon nitride over a semiconductor substrate;

B2 forming a patterned photoresist comprising masking layer over the silicon nitride layer, the patterned masking layer comprising mask openings therethrough; and

etching the silicon nitride comprising layer through the mask openings substantially selectively to the photoresist comprising layer using an etching chemistry comprising ammonia and at least one fluorocarbon under etching conditions effective to substantially anisotropically etch the silicon nitride comprising layer, the etching chemistry comprising a volumetric ratio of all fluorocarbon to the ammonia of from 40:1 to 9:1 and providing increased selectivity to the photoresist comprising masking layer than would otherwise occur using identical etching chemistry and identical etching conditions without any ammonia.

17. (Amended) C The method of claim 16 wherein the etching chemistry comprises a volumetric ratio of all fluorocarbon to the ammonia of at least 20:1.

✓ Cancel claim 18.

19. The method of claim 16 wherein the fluorocarbon comprises a hydrofluorocarbon.

20. (Twice amended) A method of forming integrated circuitry comprising:

forming a layer comprising silicon nitride over a semiconductor substrate;

forming a patterned photoresist comprising masking layer over the silicon nitride layer, the patterned masking layer comprising mask openings therethrough; and

etching the silicon nitride comprising layer through the mask openings substantially selectively to the photoresist comprising layer using an etching chemistry comprising ammonia and at least one fluorocarbon under etching conditions effective to substantially anisotropically etch the silicon nitride comprising layer, the etching chemistry comprising a volumetric ratio of all fluorocarbon to the ammonia of from 40:1 to 3:1 and providing increased selectivity to the photoresist comprising masking layer than would otherwise occur using identical etching chemistry and identical etching conditions without any ammonia, wherein the fluorocarbon is at least one member selected from the group consisting of C_4F_6 and C_5F_8.

21. The method of claim 16 wherein the silicon nitride comprising layer consists essentially of silicon nitride.

Cancel claims 22-33 and 35-45.

New Claims

Add new claims 46-64 as follows:

46. (Added) The method of claim 16 wherein the etching chemistry consists essentially of reactive components of the ammonia and the at least one fluorocarbon.

47. (Added) The method of claim 16 wherein the photoresist comprises 193 nanometer photoresist.

48. (Added) The method of claim 16 comprising introducing the ammonia and fluorocarbon successively into a reaction chamber in which the substrate is received during the etching.

49. (Added) The method of claim 16 wherein the integrated circuitry forming comprises forming shallow trench isolation within the semiconductor substrate, the photoresist comprising masking layer being patterned effective to form a plurality of shallow trench mask openings therethrough.

50. (Added) The method of claim 16 wherein the integrated circuitry forming comprises forming shallow trench isolation within the semiconductor substrate, the silicon nitride comprising layer being formed over a bulk semiconductor substrate, and the photoresist comprising masking layer being patterned effective to form a plurality of shallow trench mask openings therethrough.

51. (Added) The method of claim 20 wherein the fluorocarbon comprises C_4F_6.

52. (Added) The method of claim 20 wherein the fluorocarbon comprises C_5F_8.

53. (Added) The method of claim 20 wherein the etching chemistry consists essentially of reactive components of the ammonia and the at least one fluorocarbon.

54. (Added) The method of claim 20 wherein the photoresist comprises 193 nanometer photoresist.

55. (Added) The method of claim 20 comprising introducing the ammonia and fluorocarbon successively into a reaction chamber in which the substrate is received during the etching.

56. (Added) The method of claim 20 wherein the etching chemistry comprises a volumetric ratio of all fluorocarbon to the ammonia of at least 20:1.

57. (Added) The method of claim 20 wherein the etching comprises plasma etching.

58. (Added) The method of claim 20 wherein the etching comprises magnetically enhanced plasma etching.

59. (Added) The method of claim 20 wherein the etching comprises substantially anisotropic etching of the silicon nitride comprising layer.

60. (Added) The method of claim 20 wherein the etching chemistry comprises at least two fluorocarbons.

61. (Added) The method of claim 20 wherein the etching chemistry comprises at least three fluorocarbons.

62. (Added) The method of claim 20 wherein the etching chemistry comprises a volumetric ratio of all fluorocarbon to the ammonia of at least 9:1.

63. (Added) The method of claim 20 wherein the integrated circuitry forming comprises forming shallow trench isolation within the semiconductor substrate, the photoresist comprising masking layer being patterned effective to form a plurality of shallow trench mask openings therethrough.

64. (Added) The method of claim 20 wherein the integrated circuitry forming comprises forming shallow trench isolation within the semiconductor substrate, the silicon nitride comprising layer being formed over a bulk semiconductor substrate, and the photoresist comprising masking layer being patterned effective to form a plurality of shallow trench mask openings therethrough.